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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/700,859	11/04/2003	Young H. Kim	CL1983 US NA	6315
43693 7590 07/25/2007 INVISTA NORTH AMERICA S.A.R.L. THREE LITTLE FALLS CENTRE/1052 2801 CENTERVILLE ROAD WILMINGTON, DE 19808			EXAMINER SERGENT, RABON A	
			ART UNIT	PAPER NUMBER
			1711	
			MAIL DATE	DELIVERY MODE
			07/25/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/700,859

Applicant(s)

KIM ET AL.

Examiner

Rabon Sergent

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 May 2007.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7, 9, 10, 12-14 and 17-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9, 10, 12-14, and 17-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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1. Claims 1-7, 9, 10, 12-14, and 17-19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicants have failed to provide support for or define the phrase, "wherein the polymer is substantially free of polyamine chain extenders". It is unclear what amount of polyamine chain extender may be present and still satisfy the limitation. Furthermore, it is unclear if the claim limitation is intended to mean that the polymer, itself, is substantially free of free or unreacted polyamine chain extenders or if the polymer yielding reactants are substantially free of polyamine chain extenders. The examiner has reviewed the cited passages; however, it is not seen that these passages resolve these issues.

2. Claims 1-7, 9, 10, 12-14, and 17-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Firstly, as aforementioned, it is unclear what quantity of polyamine chain extenders are encompassed by the language, "substantially free". In other words, it is unclear how or to what extent "substantially" modifies "free".

Secondly, as aforementioned, it is unclear if the "substantially free of polyamine chain extenders" language pertains to the polymer or to the polymer forming reactants.

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible

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harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-7, 9, 10, 12-14, and 17-19 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-19 of copending Application No. 10/700,857. Although the conflicting claims are not identical, they are not patentably distinct from each other because each set of claims encompasses the same polyurethane polymer.

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This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-7, 10, 12-14, 17, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Soto et al. ('325).

Patentees disclose polyurethane aqueous dispersions wherein the polyurethane is produced from the reaction of diisocyanates, wherein aromatic diisocyanates are disclosed; polyols, including copolymers of tetrahydrofuran and ethylene oxide or propylene oxide; an

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ionic group-containing reactant, such as dimethylolpropionic acid; and chain extenders, wherein water is a preferred chain extender. Regarding the polyol component, patentees further disclose that polytetramethylene polyols are preferred, and the position is taken in view of this disclosure that this preference extends to any of the disclosed polyols derived from tetrahydrofuran. See abstract; column 5, lines 3-18; column 6, lines 41-43, 51, and 52; column 7, lines 39+; column 8; column 9, lines 17-27; and column 10, lines 36-65. Regarding applicants' claimed urea group content, the following position is taken. The claimed urea group content will be realized when aromatic diisocyanates are used with the preferred water chain extender, since no urea groups will result that contain the claimed aliphatic hydrocarbon radicals. The reference is considered to be anticipatory for the rejected claims in view of the cited preferred teachings and in view of the fact that the selection of an aromatic polyisocyanate requires only a limited selection from aliphatic isocyanates, cycloaliphatic isocyanates, and aromatic isocyanates and the selection of water as the chain extender requires only a limited selection from water and polyamines. In other words, the resulting number of combinations of types of isocyanates and types of chain extenders are sufficiently low such that the reference is anticipatory.

7. Applicants' remarks concerning the copolymer have been considered; however, they are not commensurate in scope with the claim, since the claims do not exclude additional polyol species.

8. Claims 1-7, 10, 12-14, 17, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Anand et al. ('864).

Patentees disclose polyurethane aqueous dispersions wherein the polyurethane is produced from the reaction of diisocyanates, including aromatic diisocyanates; polyols, including

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copolymers of tetrahydrofuran and ethylene oxide or propylene oxide; an ionic group-containing reactant, such as dimethylolpropionic acid; and chain extenders, wherein water is a disclosed chain extender. Regarding the polyol component, patentees further disclose that polytetramethylene polyols are preferred, and the position is taken in view of this disclosure that this preference extends to any of the disclosed copolymer polyols derived from tetrahydrofuran, since copolymer polyols derived from tetrahydrofuran are the only type of polytetramethylene polyols disclosed. Regarding the use of aromatic diisocyanates, applicants disclose at column 7, lines 54+ that the aromatic diisocyanates are preferably used in combination with aliphatic or cycloaliphatic diisocyanates in such quantities that the disclosed, resulting prepolymer will have terminal aliphatic or cycloaliphatic isocyanate moieties. See abstract; column 7, lines 54+; column 8, lines 1-6, 23, 24, 29-32, and 66+; column 11, lines 13-34; column 12, lines 62+; column 13, lines 59-61; and column 14, lines 1-14. In view of the disclosed use of water as chain extender and the preferred termination of the aromatic diisocyanate derived prepolymer with aliphatic or cycloaliphatic isocyanates groups, applicants' claimed urea group content will be realized, since the resulting urea groups will lack the claimed aromatic hydrocarbon radical. The reference is considered to be anticipatory for the rejected claims in view of the fact that only water needs to be selected from the limited group of water and diamine chain extenders and further in view of the fact that specific teachings are provided governing how aromatic diisocyanates may be employed.

9. Applicants' arguments have been considered, and the prior art rejection has been drafted in response thereto.

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10. Claims 9 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Soto et al. ('325) or Anand et al. ('864), each in view of Berger et al. ('310).

As aforementioned within paragraphs 6 and 8, the primary references disclose polyurethaneurea polymers that are considered to meet applicants' claimed polyurethaneurea polymers; however, the primary references are silent with respect to their compositions containing a surfactant. Still, the use of surfactants or emulsifying agents to promote polyurethane dispersion was known at the time of invention as evidenced by the teachings of Berger et al. at column 6, line 60 through column 7, line 69. Therefore, since it has been held *prima facie* obvious to utilize a known compound for its known function, the position is taken that it would have been obvious to incorporate surfactants or emulsifying agents within the polyurethaneurea compositions of the primary references for their art recognized purpose and function. *In re Linder*, 173 USPQ 356. *In re Dial et al.*, 140 USPQ 244.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

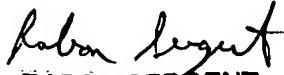
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,



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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication should be directed to R. Sergent at telephone number (571) 272-1079.

  
**RABON SERGENT**  
**PRIMARY EXAMINER**

R. Sergent  
July 23, 2007